If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.

C-A OPERATIONS PROCEDURES MANUAL

5.20 Pre-Beam MCR Checkout

Text Pages 2 through 5

Attachments

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved:_____ _____
Collider-Accelerator Department Date
Accelerator Division Head

P. Sampson

5.20 Pre-Beam MCR Checkout

1. Purpose

The purpose of this procedure is to provide Main Control Room (MCR) operators with instructions for completing checkout of the MCR.

2. Responsibilities

2.1 The MCR operators are responsible for executing this procedure when instructed to do so.

2.2 The Operations Coordinator (OC) is responsible for insuring the accurate execution of this procedure.

2.3 The OC shall initiate corrective actions to problems encountered during execution. These include:

2.3.1 informing the appropriate systems specialist of problems,

2.3.2 logging problems in the OC Log,

2.3.3 editing the attachments, when necessary, to reflect any special situations or modifications and

2.3.4 signing each attachment when completed.

2.4 The MCR Group Leader (GL), or Deputy GL, may authorize the omission of sections of this procedure by marking them N/A on C-A-OPM-ATT 5.20.a.

3. Prerequisites

Systems specialists have handed all relevant systems over to the MCR as operational.

4. Precautions

MCR operations will follow all applicable operational safety precautions while completing this procedure.

5. Procedure

5.1 The Supercycle

The overall timing of the accelerators in the C-A complex is governed by the Supercycle. The Supercycle consists of a set of triggers from which other specialized triggers are derived.

5.1.1 Complete C-A-OPM-ATT 5.20.a.

5.2 Scope Triggers

The Scope Triggers for the MCR are generated from a chassis above the MCR. There are a variety of trigger/delay schemes to choose from. After work has been done on the system or after any prolonged shutdown, this system shall be checked out.

5.2.1 Use the hardwired AGS TO signal located at MCR_4 to trigger a scope.
5.2.2 Connect each of the signals for the LINAC, BOOSTER, TANDEM and AGS listed in C-A-OPM-ATT 5.20.b to channels of this scope.

5.2.2.1 Confirm that they are present and triggering at the appropriate time.

Note:
To check many of the signals, look at the presently loaded Supercycle and determine when a signal occurs. Remember that: 1 jiffy = 1/60 seconds.

5.2.2.2 As each signal is connected, complete the appropriate section of C-A-OPM-ATT 5.20.b.

5.2.3 Check that each clock available on "XBAR"'s menu provide the expected delay when turned on and no delay when turned off.

5.2.3.1 Complete the appropriate section of C-A-OPM-ATT 5.20.b.

5.2 Video Crossbar (Video MUX):

5.3.1 Turn each of the monitors (1-8) at the MCR consoles (1-6) on and check that they are working.

5.3.1.1 Complete the appropriate section of C-A-OPM-ATT 5.20.c.

5.3.2 Select each of the video displays listed in C-A-OPM-ATT 5.20.c and determine the quality of the picture.

5.3.2.1 Complete that section.

Note:
This part of the procedure is carried out with the Main Magnet supplies for the AGS and Booster on. The System specialists will be needed to assist unless the checkouts for each of these systems has been completed.

5.4 Booster and AGS Gauss Clock Checkout

5.4.1 Check that the AGS Main Magnet is being powered.

5.4.2 Check that the Booster Main Magnet is powered.

5.4.3 Start `Configure' if it is not already running.

5.4.3.1 Using `Configures' timing options, check that all expected gauss triggers are present for the Primary, Backup and Synthetic clocks.

5.4.4 Complete C-A-OPM-ATT 5.20.d.

5.5 Scaler Unit Checkout

5.5.1 Turn on the Joerger scaler units located at each MCR console.

5.5.2 Press the self-test button on the front of each scaler.

5.5.2.1 The scaler shall run free in self-test mode. Any scalers that appear to be malfunctioning shall be noted in the space provided in C-A-OPM-ATT 5.20.e.

Note:
The accepted value for the scaler calibration will be given to the MCR by the specialist, prior to each run.

5.5.2.2. Note any scalers that are not within the prescribed calibration in the spaces provide in C-A-OPM-ATT 5.20.e.

6. Documentation

6.1 The attachments for this procedure will be held in a binder in the MCR and contains all the completed work as well as a list of problems encountered.

6.2 The OC will report progress made for each shift to the next shift by documentation in the OC Log.

7. References

7.1 C-A-OPM, Chapters 6 and 8.

8. Attachments

8.1 C-A-OPM-ATT 5.20.a, "Supercycle Checkout".

8.2 C-A-OPM-ATT 5.20.b, "Scope Trigger and Delay Checkout".

8.3 C-A-OPM-ATT 5.20.c, "Video MUX and Comfort Display Checkout".

8.4 C-A-OPM-ATT 5.20.d, "Gauss Clock Checkout".

8.5 C-A-OPM-ATT 5.20.e, "Scaler Checkout".